Federal Aviation
Administration

SWIM connect

What is SWIM?

System Wide Information Management (SWIM) is a National Airspace System (NAS)-wide information system that supports Next Generation Air Transportation System (NextGen) goals.

SWIM provides the digital data-sharing backbone of NextGen and enables increased common situational awareness and agility in the NAS. SWIM is delivering the right information to the right people at the right time. SWIM offers a single point of access for aviation data: Producers of data publish it once, and users access the information they need through a single connection.

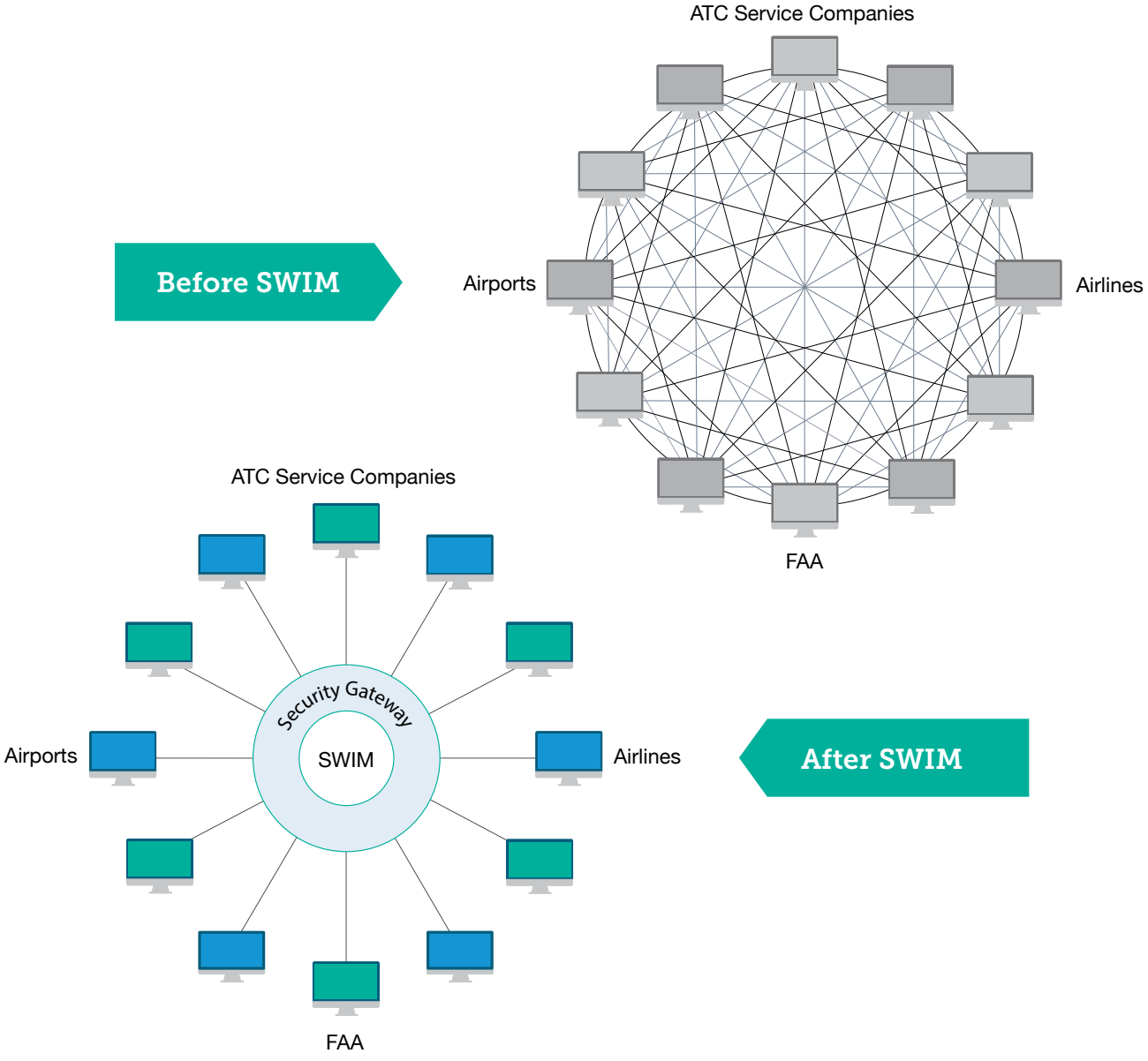
As part of the NextGen portfolio of programs, SWIM will allow airline operations, air traffic managers and controllers, military, and other stakeholders to share information in near real time.

Why SWIM?

In the past, the state of the art for connecting two systems required a fixed network connection and custom, point-to-point, application-level data interfaces.

Current NAS operations depend upon these legacy information systems with some systems entirely unconnected. The FAA identified a need to reduce the high degree of interdependence among systems and move away from the proliferation of unique, point-to-point application interfaces.

In 2007, the FAA established the SWIM Program to implement a set of Information Technology principles in the NAS and provide users with relevant and commonly understandable information.


Before SWIM
ATC Service Companies
Airports
Airlines
FAA
After SWIM
ATC Service Companies
Security Gateway
SWIM
Airports
Airlines
FAA

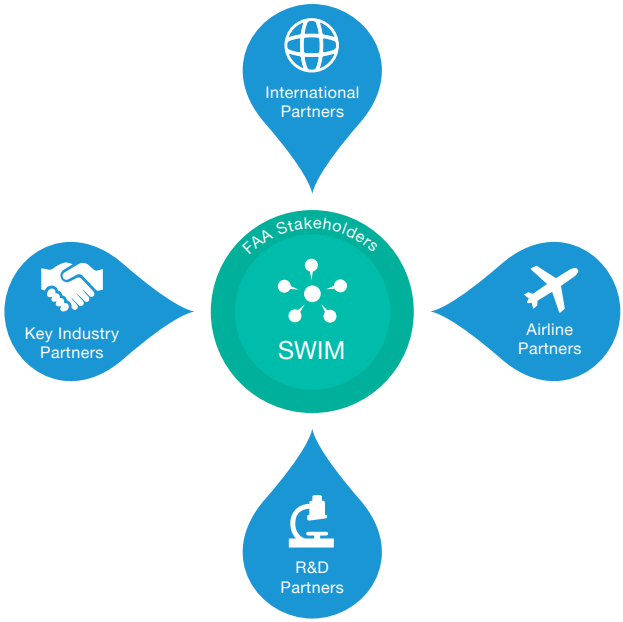
How SWIM Works

As SWIM strategically progresses toward an end goal of promoting information sharing in NAS, it is increasingly important that the aviation community join SWIM as partners in shaping future needs.

Partnerships with industry and other government agencies will enable SWIM to provide the IT infrastructure necessary for NAS systems to share information, increase interoperability, and encourage reusability of information and services.

"Before, the airport was a big black hole. Now our eyes are open and we can see what is going on... Now we can be more dynamic in our decisions. We're moving traffic more efficiently because we can see the information available on the ground."

–Manager, Southern California Terminal Radar Approach Control



"No longer will an airline need to contact dozens of places to draw down surface movement information and weather from various airports."

–Michael Huerta, FAA Administrator

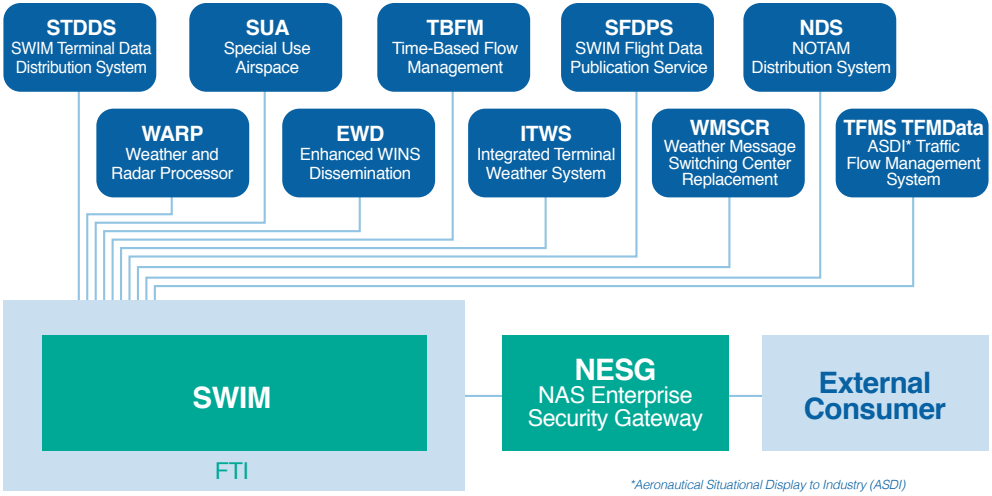
SWIM Today

SWIM enables the sharing of information between diverse systems, enabling NextGen to deliver the right information to the right place at the right time.

SWIM allows software applications in the NAS to seamlessly interact with one another; this simplifies interface requirements to existing NAS systems and ensures new systems can be built with minimum technology (hardware, software, and data definition) constraints. SWIM also enables the transition away from tactical conflict management to net-centric NAS operations, and strategic, trajectory-based operations.

SWIM's Implementation is Segmented

- In each segment, a set of NAS services is being developed and integrated via SWIM.
- Enterprise infrastructure is added to support the implementation of new capabilities associated with the segments, enabling diverse systems to request and receive information as needed, subscribe for automatic updates, and publish information as appropriate.



*Aeronautical Situational Display to Industry (ASDI)

SWIM Roadmap

- **Corridor Integrated Weather System**, *2016*
- **Aeronautical Information Management (AIM) Modernization Segment 2**, *2016*
- **NAS Common Reference (NCR)**, *2018*
- **Common Support Services for Weather (CSS-Wx)**, *2018*
- **Terminal Flight Data Management (TFDM)**, *2019+*

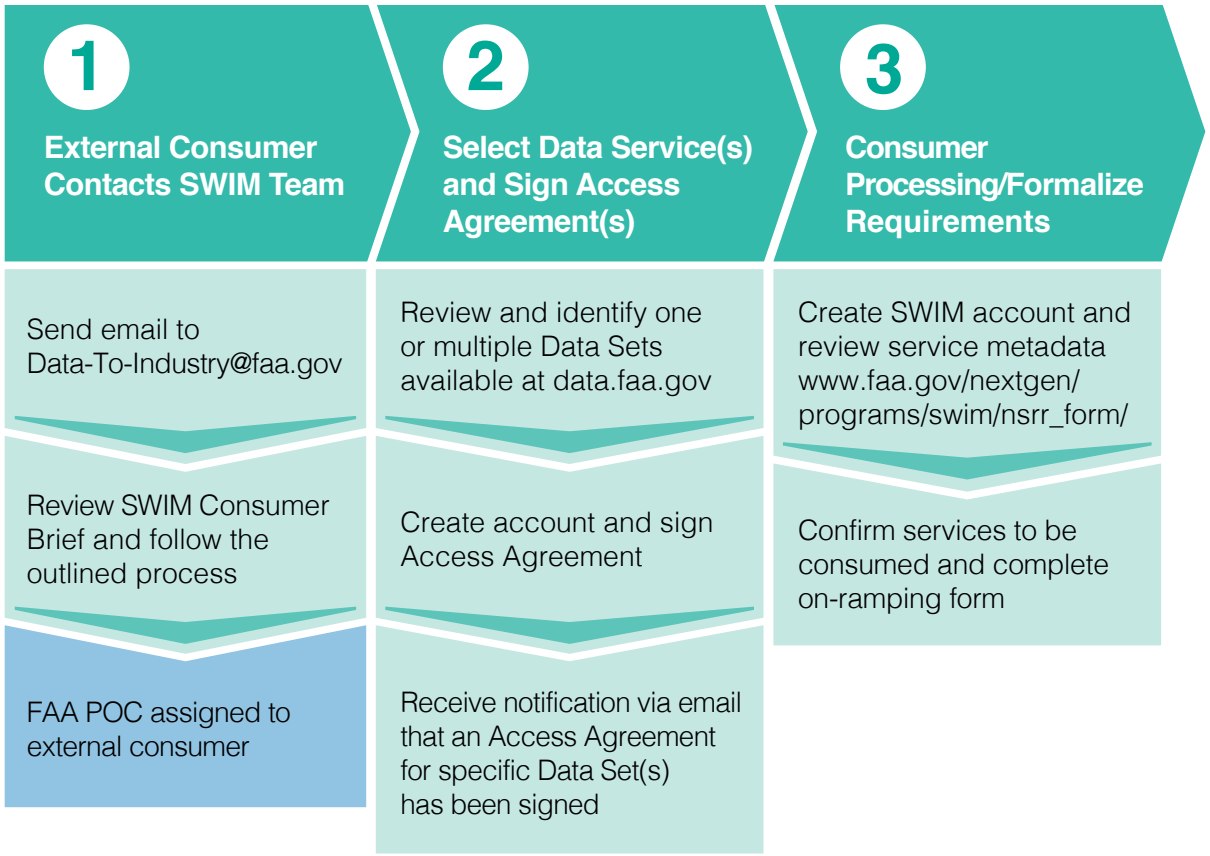
"SWIM will help if you want to know what the departure line looks like at an airport, or if you want to see delays or know if weather is impacting operations."

–Michael Huerta, FAA Administrator

"The progress we have made is now starting to provide significant benefits to the traveling public. These benefits — in efficiency, economy and the environment — will be demonstrated and increase significantly as we move ahead with NextGen."

–Edward Bolton, FAA Assistant Administrator for NextGen

Get SWIM Connected



For more information:
faa.gov/nextgen/swim

U.S. Department of Transportation

Federal Aviation Administration

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